MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 1, 2016/2017

DEN5018 –ENGLISH

(All groups)

20 OCTOBER 2016
9:00AM – 11:00AM
(2 Hours)

INSTRUCTIONS TO STUDENT

1. This question paper consists of **NINE** pages only.
2. Answer **ALL** questions in **Sections A** and **B**.
3. Write **ALL** your answers in the Answer Booklet provided.

SECTION A: READING AND VOCABULARY [30 MARKS]

Question 1: Contextual Clues (10 marks)
Instructions: *Read the passage below and answer the questions that follow.*

Vertical Farming

1 The island city of Singapore, with an area of 710 square km and a population of 5 million, is one of the most **densely** populated cities in the world. With most parts of the island's land utilised for urban development, the remaining 250 acres of farmland is hardly **sufficient** to feed the growing population. As a consequence, more than 90 per cent of Singapore's food consumption is met by imports from over 30 countries.

2 This dependency on the external world makes the country highly vulnerable to turbulence in food supply and prices. The only way out of this problem is to maximise the use of land for food production. For Singapore, where real estate is at a premium and the land rates are exceptionally high, the only viable option is to go vertical to make the island more self-sufficient in food.

3 In making this goal of a food self-reliant Singapore a reality, entrepreneur Jack Ng, with the help of Agri-Food and Veterinary Authority (AVA), has come up with one of the world's first commercial vertical farms. This soil-based vertical farm produces one ton of vegetables every other day and is five to ten times more productive than a regular farm. It is the first low carbon hydraulic water-driven vertical system in the world to grow tropical-vegetables vertically in the tropics, which gives **significant** yield and uses less water, energy and natural resources, to achieve a sustainable green high-tech farm.

4 This vertical farming system, called "A-Go-Gro" technology, grows vegetables in A-shaped towers, each of six metres tall. These modular A-frames are quick to instal and easy to maintain. Each tower consists of 22 to 26 tiers of growing troughs, which are rotated around the aluminium tower frame at a rate of 1mm per second to ensure uniform distribution of sunlight, good air flow and irrigation for all the plants. According to Ng, "the plants do not get overstressed under the sun and at the same time they can get nutrients in the water equally". Besides that, the rotation system does not need an electrical generator. It is powered by a **unique** gravity aided water-pulley system that uses only one litre of water.

5 The vertical farming system is housed in a protected environment of PVC roofing and netted walls to enable cultivation of tropical leafy vegetables under natural sunlight, all year round. The farm is set in an open area **designated** by the government as an agro-technology park, miles away from the shadow of city skyscrapers. A total of 120 such towers have been built in the area allocated in Kranji, 14 miles from Singapore's central business district, with plans for 300 more, which would allow the farm to produce two tons of vegetables per day.

6 This farming system generates significantly higher yields than traditional growing methods and most importantly they are safe, of high quality, and fresh. Large varieties of tropical vegetables are grown, such as, chinese cabbage, spinach, and lettuce. The vegetables are harvested every day and delivered almost immediately to retail outlets.

7 Every day vegetables are shipped into Singapore from neighbouring countries like Malaysia, Indonesia, and from far-off countries such as China, US and countries from Europe. The Singapore government, in order to cut down on

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this dependency, has an objective of reaching 10 per cent local production of leafy vegetables. The current figure stands at 7 per cent. This initiative of vertical farming along with the existing 37 vegetable farms will definitely help to reach the 10 per cent local production target. This will not only **decrease** the "food miles" but also lessen supply shortages and hoarding. As one government official puts it, "We cannot depend totally on imports. We are a land-scarce country and therefore need to be able to maximise use of our land in the area of food production. Local production acts as a buffer against severe **disruptions** in food supply and ensures that people will continue to have enough food on their tables".

Adapted from Ravindra Krishnamurthy. (25 July 2014). *Vertical Farming: Singapore's Solution to Feed the Local Urban Population.* Retrieved from http://permaculturenews.org/2014/07/25/vertical-farming-singapores-solution-feed-local-urban-population/

Question 1A
Instructions: *Provide a word from the reading passage for each definition below.*

Example:	**over crowdedly / thickly crowded**	**(paragraph 1)**	**word: densely**
i)	possible or practical to do	(paragraph 2)	
ii)	fruitful	(paragraph 3)	
iii)	moved something in a circular path	(paragraph 4)	
iv)	gathered produce at the end of season	(paragraph 6)	
v)	relying on someone or something for support	(paragraph 7)	

Question 1B
Instructions: *Provide a word or phrase that best defines each of the following words as used in the passage.*

Example:	**sufficient**	**(line 4)**	**word: enough**
i)	significant	(line 18)	
ii)	unique	(line 28)	
iii)	designated	(line 31)	
iv)	decrease	(line 47)	
v)	disruptions	(line 51)	

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Question 2: Reading Comprehension (20 marks)
Instructions: *Read the passage below and answer the questions that follow.*

Bangladesh: The Coming Storm

1 Bangladesh is one of the most densely-populated nations on Earth. It has more people than geographically-massive Russia. It is a place where one person, in a nation of 164 million, is mathematically incapable of being truly alone. So, imagine Bangladesh in the year 2050, when its population will likely have increased to 220 million, and a large size of its current land could be permanently underwater.

2 The future of Bangladesh is doomed by two projections. First, population growth that, despite a sharp decline in fertility, will continue to produce millions more Bangladeshis in the coming decades and second, a possible high rise in sea level by 2100 as a result of climate change. Over the coming decades, as sea levels rise, many of the world's largest cities, including Miami and New York, will be affected by coastal flooding. Of all the countries in the world, Bangladesh is one of the most vulnerable to the effects of climate change.

3 The regular and severe natural hazards such as tropical cyclones, river erosion, flood, landslides and drought that have already battered the country are all set to increase as a result of climate change. The adverse effects of climate change will badly affect Bangladesh. Rising sea levels will increasingly drown Bangladesh's coast, and dramatic coastal and river erosion will destroy land and homes. It will also deeply affect the economy and development of the country. However, the most dramatic impacts will be the forced movement of people throughout Bangladesh as a result of losing their homes, lands, property and livelihoods to the effects of climate change. It is estimated that rising sea levels alone will displace 18 million Bangladeshis within the next 40 years. The vast majority of these people will be displaced to major cities in the country and thus, presenting the government with major challenges in the future, particularly when it comes to finding places to live and work for those who have been displaced.

4 Bangladesh has always been a crisis-driven country. Since independence in 1971, the country has faced war, famine, disease, killer cyclones, massive floods, and pitiable rates of poverty and deprivation. However, the country has bounced back from crisis after crisis, proving itself to be an innovative and resourceful nation. Interestingly, although the country is facing a great crisis of overpopulation and climate change, it is making a good progress to deal with both of these issues.

5 The country is adapting to climate changes in the best way it could. Various innovative technologies are being used in Bangladesh now to help the country to face the effects of climate change efficiently. Supported by governments of the industrialised countries and international non-governmental organisations (NGOs), these innovations are becoming successful. However, the biggest reason for the success is the one commodity that Bangladesh has in profusion: human resilience.

6 As the country is prone to floods and cyclones, Bangladeshis have gotten a head start on preparing for a climate-changed future. For decades they have been developing more salt-resistant strains of rice and building dikes to keep low-lying farms from being flooded with seawater. As a result, the country has actually doubled its production of rice since the early 1970s. Similarly its frequent cyclones have prompted it to build cyclone shelters and develop early-warning systems for natural disasters. More recently they have set up floating schools, hospitals, and

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libraries that keep right on functioning through monsoon season.

7 Believe it or not, the country has a population success story as well. To reduce its high birthrate, Bangladesh developed a grassroots family-planning programme in the 1970s that has lowered its fertility rate from 6.6 children per woman in 1977 to about 2.4 today, a historic record for a country with so much poverty and illiteracy. Fertility decline has generally been associated with economic improvement, which prompts parents to limit family size so they can provide education and other opportunities to their children. However, Bangladesh has been able to reduce fertility despite its lack of economic development. "It was very hard in the beginning," says Begum Rokeya, 42, a government health worker. "This is a very conservative country, and men put pressure on women to have lots of children," she added. However, health workers made frequent home visits to persuade couples especially newlyweds to plan their family. They also worked hard to convince parents to immunise their children by making immunisation available even in rural areas. According to Rokeya, this worked as "they began to see that if they immunised their kids, they would not need to have many babies just so a few would survive. They like the idea of fewer mouths to feed."

8 Working in partnership with dozens of NGOs, Bangladesh has also made huge strides in empowering women through education. This has helped to increase female work-participation rates and economy in general. Besides, it also helped Bangladesh to meet an important UN Millennium Development Goal. The country's infant mortality dropped dramatically between 1990 and 2008, from 100 deaths per 1,000 births to 43. This is one of the highest improvement rates among low-income countries.

9 Bangladesh is making such great progress that before this century is over, the world, rather than pitying Bangladesh, may learn from her example. "Let me tell you about Bangladeshis," says Zakir Kibria, 37, a political scientist who serves as a policy analyst. "We may be poor and appear disorganised, but we are not victims. And when things get tough, people here do what they have always done. They find a way to adapt and survive. We can adapt to just about anything."

Adapted from Belt, D. (May 2011). *Bangladesh: The coming storm.* Retrieved from http://ngm.nationalgeographic.com/2011/05/bangladesh/belt-text

Question 2A: True or False (5 marks)

Instructions: *For each statement, write (T) if the statement is true and (F) if the statement is false.*

a) Although bigger in size, Russia has lesser population than Bangladesh.

b) Of all the countries in the world, Bangladesh will be affected by climate change first.

c) Bangladesh's grassroots family-planning programme that was developed in 1970s can be considered as efficient.

d) Bangladesh has proven that fertility rate is linked to economic development of a country.

e) Before the century is over, the world may learn about the pitying state of Bangladesh.

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Question 2B: Comprehension Questions (15 marks)
Instructions: *Answer the following questions in **COMPLETE** sentences.*

a) What are the two projections that have doomed the future of Bangladesh? (2 marks)

b) i. State three effects that Bangladesh will face because of adverse climate change. (3 marks)

ii. What will be the major challenges for the country in the future? (1 mark)

c) Who are contributing to Bangladesh's success in using innovations to face climate change? (2 marks)

d) How are Bangladeshis preparing themselves for a climate-changed future? (3 marks)

e) Explain the ways health officers persuaded people to have fewer children. (2 marks)

f) State two benefits that Bangladesh gained by empowering women through education. (2 marks)

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SECTION B: GRAMMAR [30 MARKS]
Question 1: Word Classes [10 marks]
Instructions: *Read the text and identify the correct word classes of the words in bold. Write your answers as shown in the example.*

Example: (0) right - Adverb

Why Adult Colouring Books Are Good for You?

Colouring books are no longer just for the children. In fact, adult colouring books are all the rage **(0) right** now. While researchers and art therapists alike have touted the calming benefits for over a decade, it is childhood favourite Crayola that has gotten adult colouring books some serious grown-up attention. The famous crayon makers just **(1) launched** a set of markers, coloured pencils and a collection of adult colouring books, Colouring Escapes, last month.

Although the first **(2) commercially** successful adult colouring books were published in 2012 and 2013, the once-niche hobby has grown into a full-on trend now, with everyone suggesting colouring as an alternative to meditation. According to the American Art Therapy Association, art therapy is a mental health profession in which the process of making and creating artwork is used to explore feelings, reconcile emotional conflicts, foster self-awareness, manage behaviour and addictions, develop social skills, improve reality orientation, and reduce anxiety **(3) or** stress. Hence, basically, it is similar to good old therapy.

However, it is important to note that using an adult colouring book is not exactly the same as completing an art therapy session. "Colouring **(4) itself** cannot be called art therapy because art therapy relies on the relationship between the client and the therapist," says Marygrace Berberian, a **(5) certified** art therapist. While art therapy was first practised in the 1940s, the first research on using colouring as therapy is generally believed to have only begun recently in the mid **(6) of** 1990s.

Despite the fact that colouring and art therapy are not quite the same thing, colouring does offer a slew of mental benefits. "Colouring definitely has therapeutic **(7) potential** to reduce anxiety, create focus or bring about more mindfulness," says Berberian. Groundbreaking research in 2005 proved anxiety levels dropped when subjects coloured mandalas, which are round frames with geometric patterns inside. However, simply doodling had no effect in reducing the other subjects stress levels.

Just like meditation, colouring also allows us to switch off our brains from other thoughts and focus only on the moment, helping to **(8) alleviate** free-floating anxiety. It can be particularly effective for people who are not comfortable with more **(9) creatively** expressive forms of art, says Berberian, "My experience has been that those participants who are more guarded find a lot of **(10) tranquility** in colouring an image. It feels safer and it creates containment around their process," she adds.

Adapted from Fitzpatrick, *K. (6 January 2016). Why adult colouring books are good for you?* Retrieved from *http://edition.cnn.com/2016/01/06/health/adult-coloring-books-popularity-mental-health/*

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Question 2: Subject-Verb Agreement (10 marks)
Instructions: *The following extract contains 10 errors on Subject-Verb Agreement. Identify the errors and correct them as shown in the example.*

Example:

No.	Line	Error	Correction
0	1	spends	spend

This Is Why You Have Grey Hair

Everyone gets them, and many **spends** hundreds or even thousands to cover them up. Grey hair is one of the inevitable parts of getting older, but not everyone are happy to see them. Spotting the first grey hair is a disheartening rite of passage for most people. However, a major breakthrough by British scientists could mean that future generations will no longer suffer the inevitable indignity of the ageing process.

Researchers at University College London have discovered the gene responsible for grey hair and is confident that it will be possible to create drugs or cosmetics to switch it off. Grey hair is caused by the depletion of melanin, which are responsible for the pigment in hair, skin and eyes, making blondes lighter and brunettes darker.

Scientists had known that a gene called IRF4 played a crucial role in hair colour, but for the first time they were also able to link it to going grey. Led by Kaustubh Adhikari, a postdoctoral researcher at University College London, the group sequenced the genomes of more than 6000 people from Latin America and compared their genes against various hair features, including how much grey hair they had. Adhikari says that for grey hair, only one gene stood out. It is a gene that has been connected to blonde hair in Europeans, which makes sense since it also affects how much melanin the hair follicle receive. "We already know that several genes are involved in balding and hair colour, but this is the first time a gene for greying as well as other genes influencing hair shape and density, have been identified in humans, " added Adhikari. "It was only possible because we analysed a diverse melting pot of people, which have not been done before on this scale.

These findings have potential forensic and cosmetic applications as we increase our knowledge on how genes influences the way we look. "Preventing grey hair is a possibility and even reversing grey hair might not be impossible. Once we know more about the pigmentation processes, and all the genes involved, finding a protein or enzyme to up-regulate or down-regulate the processes are easy."

The discovery could lead to new products that helps people avoid getting grey hair in the first place if these products can replace the melanin and keep a hair follicle's original colour. "We might have drugs that boost or stop the protein from acting and change the amount of melanin in hair follicles and change the hair internally," says Adhikari. "So, once the hair come out like the way we want, we do not have to go out and buy dyes." That may be a while away yet, but now that there is a gene that researchers can target, eventually you may not have to visit the hair colourist any more.

Adapted from Park, A. (1 March 2016). *This Is Why You Have Grey Hair*. Retrieved from http://time.com/4242120/gray-hair-causes/

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Question 3: Tenses [10 marks]
Instructions: *For questions 1-10, read the text and choose the best answer.*

Example (0) __B__

How Whales Are Deliberately Hunted by 'Accident'?

Days before the Whale Festival in Ulsan, South Korea, last month, authorities **(0) __B__** a cold storage unit and found more than 27 tons about 40 whales' worth of whale meat worth $3.4 million. The meat belonged to minke whales, which can grow to 35 feet long and swim as fast as 20 miles an hour. While Japan, Norway, and Iceland receive most of the heat for whaling, South Korea also (1) _____ in controversial whaling practices. South Korean fishermen are known to take advantage of a loophole that allows them to legally sell whale meat from animals that are accidentally caught in fishing nets.

South Korea reports an average of 80 to 100 whales as bycatch annually to the International Whaling Commission, the body that regulates whaling and whale conservation. Such a high number (2) _____ conservationists and scientists to conclude that something is suspicious. "That bycatch is about 10 times higher than that of other countries," says Astrid Fuchs at the Massachusetts-based nonprofit group Whale and Dolphin Conservation. According to Fuchs, those reported numbers are likely an understatement and that experts and NGOs in the country (3) _____ bycatch numbers are at least double of what is reported.

Whale hunting is banned both by South Korean law and by the International Whaling Commission, which put a moratorium on commercial whaling in 1986, but whale meat (4) _____ popular in several coastal cities till today. Ulsan, home to the Whale Festival, (5)_____ in whaling since the Korean Empire and Russia joined forces in the late 19th century to establish whaling bases. In this city of little more than a million people, more than a hundred restaurants serve whale.

The high level of bycatch in Korean waters (6) _____ to a high demand for whale meat in Korean restaurants now. If a whale is caught as bycatch, the law requires fishermen to report the incident to the Coast Guard. Then, the officer in-charge (7) _____ the body to make sure that there are not any harpoon marks before issuing a permit to auction the whale. However, under the current system of monitoring and controlling, it is easy to launder illegally-hunted minke meat as bycatch. One minke whale can earn a fisherman up to $85,000. Restaurants will then mark it up and sell it for a bigger profit. Currently, there are some fishermen who (8) _____ fresh minke meat to restaurants at premium prices but bycatch is rarely fresh. Hence, those fishermen who (9) _____ to make a living for years converted their boats to fire harpoons and hunted minke at night instead.

Aside from the bycatch loophole, under-the-radar illegal hunting is a problem in South Korea too. Economic analysis (10) _____ that the price of whale meat was falling even though demand was rising and official bycatch numbers were not changing. This suggests strongly that additional supply is coming from an illegal source.

Adapted from Bale, R. (16 June 2016). *How Whales Are Deliberately Hunted by 'Accident'?* Retrieved from http://news.nationalgeographic.com/2016/06/south-korea-whaling-bycatch/

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0.	**A. raid**	**B. raided**	**C. is raiding**	**D. was raiding**
1.	A. engaged	B. is engaging	C. was engaging	D. will engage
2.	A. lead	B. led	C. has led	D. had led
3.	A. estimate	B. estimated	C. were estimating	D. had estimated
4.	A. remains	B. remained	C. will remain	D. had been remaining
5.	A. involves	B. involved	C. has been involved	D. had been involved
6.	A. contribute	B. contributed	C. is contributing	D. was contributing
7.	A. inspected	B. will inspect	C. will have inspected	D. will have been inspecting
8.	A. supplied	B. are supplying	C. were supplying	D. will supply
9.	A. struggle	B. struggled	C. have been struggling	D. had been struggling
10.	A. find	B. found	C. has found	D. had found

End of paper